



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Gerald D. Sauder et. al

Group Art Unit: 3654

Serial No.: 09/841,473

Examiner: Scott Haugland

Filed: April 24, 2001

Title: TAKE-UP REEL WITH UNI-DIRECTIONAL SPEED GOVERNED RETRACTOR

**SUPPLEMENTAL DECLARATION UNDER 37 C.F.R. § 1.131**

Commissioner of Patents and Trademarks  
BOX AMENDMENT – NO FEE  
Washington, D.C. 20231

**RECEIVED**

SEP 25 2003

**GROUP 3600**

Sir:

1. We, the undersigned are co-inventors of claims 1-20 of the patent application identified above and of the subject matter described and claimed therein. All acts described herein as being carried out by us, were carried out in the State of Arizona, United States of America.

2. As noted in our previous Declaration in this application, prior to December 3, 1998, we conceived of the idea of using a unidirectional viscous damper to retard the rewind speed, but not the unwind speed, of a hose reel as disclosed and claimed in the application.

3. As noted also in our previous Declaration, on December 4, 1998, Mr. Sauder sent a copy of a drawing outlining the area available for a damper to Ace Controls along with a request for Ace Controls to cooperate with us in the design of a viscous damper for the hose reel.

4. What was omitted from the previous Declaration, however, was that at the time of Mr. Sauder's request to Ace Controls, we were already in possession of an Ace Rotary Dampers catalog, an excerpt of which is attached hereto as Exhibit 1, which describes the construction of the Ace Rotary Damper we were considering to be the basis for our proposed custom rotary damper. We were aware at that time that the Ace damper consisted of a rotary damper having an internal one way clutch on the output shaft and, therefore, considered a viscous damper having a one way clutch to be part of our design as early as December 4, 1998.

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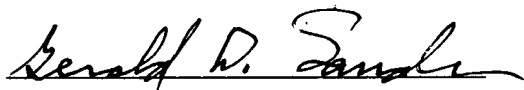
Title: Take-up Reel with Uni-directional Speed Governed Retractor

**Declaration**

5. At no time did we abandon the concept of a hose reel having a viscous damper in combination with a unidirectional clutch, however, due to cost concerns, we did pursue the concept of a folding paddle viscous damper *in parallel* with the development of a hose reel having a viscous damper and unidirectional clutch. During the months of January-February 1999, Mr. Baca concentrated primarily on the folding paddle design, while Mr. Sauder concentrated on the viscous damper/unidirectional clutch concept that ultimately was chosen for production.

6. As noted in our previous Declaration, the first prototype (which was of the viscous damper and unidirectional clutch design) was completed on March 8, 1999.

The undersigned being duly warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon hereby declares that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true.



Gerald D. Sauder

9-6-03

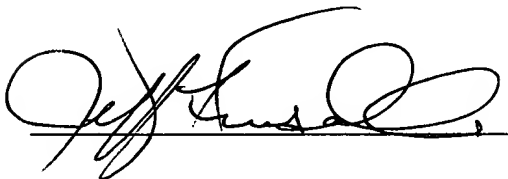
Date



Andre J. Baca

9-9-03

Date



Jeff Knosalla

9-5-03

Date

# ACE Rotary Dampers

ACE Controls, Inc. offers a world class range of compact rotary dampers that enable products to function with a smooth mechanical motion, resulting in that touch of quality. Incorporation of ACE's reliable dampers can protect delicate electronics and extend the life of your product by helping to prevent lid and access panel closure damage. In addition, superior noise suppression is obtained as a direct result of the smooth flowing motion provided by ACE's dependable rotary dampers.

In today's liability conscious world it pays to incorporate elements into your product design that reduce your chances of liability litigation. ACE's rotary dampers can help make your product safer for today's discerning, safety conscious consumers.

All rotary motion control models are available with damping in both directions of rotation (RT models). Alternatively, certain model sizes (C2, D2, F1) are available with the option of unidirectional damping, i.e. damping action only in a clockwise or counterclockwise rotation and free travel in the opposite rotation (RN models). This is achieved by means of an internal one way clutch on the output shaft.

If your application calls for locking in both directions of motion, the versatile ACE Controls (A1/B1) bi-directional locking series of rotary dampers can be added to enhance the functionality of your new product design.

## GENERAL SPECIFICATIONS ON ALL ROTARY DAMPERS

Maximum Cycle Rate	Nominal Torque Rating	Operating Temperature	Storage Temperature
10 Cycles per minute	Measured at 20 rpm & 73°F	32° - 122°F (0° - 50°C)	-4° - 140°F (-20° - 60°C)

## CONVERSIONS

Physical Quantity	Divide	By	To Obtain
Torque	gf cm	72	in oz
Torque	gf cm	1152	in lb
Torque	kgf cm	1.152	in lb
Length	mm	25.4	in
Length	cm	2.54	in
Angular Velocity	deg/s	6	rpm
Angular Velocity	deg/s	57.30	rad/s
Angular Velocity	rpm	9.55	rad/s

Temperature
$T_F = 32 + (9/5) T_C$
$T_C = (5/9) (T_F - 32)$
Where:
$T_F$ = Temperature °Fahrenheit
$T_C$ = Temperature °Celsius

## MOUNTINGS TO AVOID

Rotary dampers are designed for controlling rotary and linear motion. Shown below are examples of mountings that should be avoided.

